

Translation

PATENT COOPERATION TREATY

534,884  
PCT/ES2003/000392



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference AX030046WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/ES2003/000392	International filing date (day/month/year) 25 July 2003 (25.07.2003)	Priority date (day/month/year) 14 November 2002 (14.11.2002)
International Patent Classification (IPC) or national classification and IPC G01J 3/44		
Applicant FIBERCOM S.L.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of _____ sheets, including this cover sheet.  <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 27 April 2004 (27.04.2004)	Date of completion of this report 11 June 2004 (11.06.2004)
Name and mailing address of the IPEA/ES	Authorized officer
Facsimile No.	Telephone No.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/ES2003/000392

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
pages \_\_\_\_\_ 1 a 12 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
pages \_\_\_\_\_ 13 a 16 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, as amended (together with any statement under Article 19  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
pages \_\_\_\_\_ 1 & 2 \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
pages \_\_\_\_\_, as originally filed  
pages \_\_\_\_\_, filed with the demand  
pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/ES 03/00392

## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

## 1. Statement

Novelty (N)	Claims	1-21	YES
	Claims		NO
Inventive step (IS)	Claims	1-21	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-21	YES
	Claims		NO

## 2. Citations and explanations

This report makes reference to the following documents:

D01: US 5623336 A, published on 22 April 1997

D02: EP 1199549, published on 24 April 1002

D03: Data base PAJ in EPOQUNET, JP4122835, published on  
23 April 1992

The invention relates to a device for analysing optical spectra by Brillouin scattering. The device comprises a narrow band optical source, an optical fibre section, an optical circulator, a second optical inlet, a detection system, a control and data acquisition system, an optical spacer and a polarisation controller; it may optionally contain an optical amplifier and one or more amplitude or polarisation modulators.

This device introduces a problem signal through an optical inlet into the optical fibre, at the end opposite to the probe signal inlet. Those signals propagate in opposite directions and when they interact in the optical fibre section, the probe signal and the problem signal generate an output signal which, once it is detected, can be analysed and supply data by means of a control system connected to the optical source.

Document D01, which is considered to represent the closest prior art, discloses a method and apparatus or device for analysing optical fibres using Brillouin spectroscopy. However, it uses a photodetector and a resonator, together with a thermostat. Although that document discusses how to characterise or analyse said fibres using spectral resolution, it uses a system that differs from the system according to the invention, both in form and in substance.

The applicant cites D02 as a prior art document. That document describes a device that uses the Brillouin scattering effect in an optical fibre and differs in that the problem and probe signal follow identical paths, rather than opposite paths with opposite directions of propagation, in order to obtain the Brillouin amplification effect.

Finally, document D03 is cited only as representative of the prior art in this field; it describes a spectroscopic method that uses the stimulated Brillouin phenomenon.

None of the documents cited in the international search report describes an analysis device as defined in the claims. The citations only describe the prior art and consequently the invention is novel, involves an inventive step and is industrially applicable.